

Purpura

• Definition:

Discoloration of skin and mucous membrane, due to extravasation of RBCs.

It appears as:

- 1) Petechiae: purpuric small macule or papule \downarrow 3m.
- 2) Ecchymoses (bruises): purpuric patches or plaque due to larger extravasation of blood.

• Classification:

Intravascular causes	Vascular causes	Extravascular causes
I. <u>Decreased platelets (Thrombocytopenia):</u> 1) Radiation malignancy or splenomegaly. 2) Increased destruction: - ITP. - TTP. - DIC. - Platelet consumption in splenomegaly or hemangiomas.	I. <u>Inflammatory (vasculitis):</u> 1) Leukocytoclastic. 2) Lymphocytic. 3) Bact. Vasculitis. II. <u>Cryoglobulinemias.</u> III. <u>Tumor emboli or fat emboli.</u>	1) Purpura simplex. 2) Purpura senilis. 3) Trauma. 4) Toxins e.g. venoms. 5) Connective tissue disease e.g. amyloidosis. 6) Autoerythrocyte sensitivity syndrome.
II. <u>Normal platelet (Thrombopathy):</u> Congenital or acquired e.g. lupus, anticoagulants.		
III. <u>High platelet (Thrombocythemia):</u> e.g. carcinoma.		

Intravascular causes

- Normal platelet count = 150.000-400.000/cm³.
- Thrombocytopenia below 50.000 of normally functioning platelets → hemorrhage.

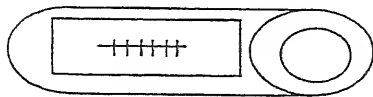
1. Idiopathic thrombocytopenic purpura (ITP):

- C.P:
 - Petechiae and ecchymoses in the skin and mm.
 - Hemorrhage from nose, mouth or uterus.
- Pathogenesis:
 - It is an autoimmune disorder result from a circulating antiplatelet factor (7S type of Ig) → platelet clumping and accelerates platelet destruction by macrophages especially in the spleen.
- Treatment:
 - Corticosteroids.
 - Azathioprine.
 - Splenectomy.

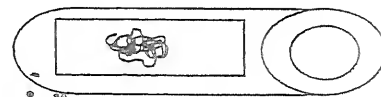


2. Thrombotic thrombocytopenic purpura (TTP):

- C.P:
 - Petechiae and ecchymoses in the skin and mm.
 - Hemolytic anemia with jaundice, renal manifestations, fever, hemoptysis & neurological signs (encephalopathy).
- Pathogenesis:



Vascular endothelial injury



Platelet aggregation

- Treatment:
 - Corticosteroid in large dose.
 - Splenectomy.
 - Plasma exchange.

(iii) disseminated intravascular coagulation (purpura fulminans) :

- Clinical picture of DIC varying from severe and rapidly fatal disorder to relatively minor disorder.
- Aetiology :
 - Severe infection : G-ve septicemia.
 - Snake bite.
- Pathogenesis
 - The 1st defect is severe deficiency of protein C that has anticoagulant and profibrinolytic activities → disseminated intravascular coagulation → Depletion of platelet, fibrinogen and other coagulation factors (consumption coagulopathy).

Clinically :



In severe cases

- Sudden onset of petechiae, echymosis & Hgs.



In mild cases

- Petechiae & echymosis
- Haemorrhagic papules
- Haemorrhagic bullae



Death within 2-3 days

- Treatment :
 - Treatment of the cause.
 - Heparin.
 - ttt of shock.

Extravascular causes

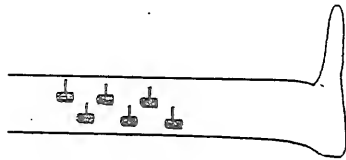
1. Purpura simplex:

- Occur in healthy women: about time of menses.
- C.P.: area of petechiae and ecchymoses on the thigh.

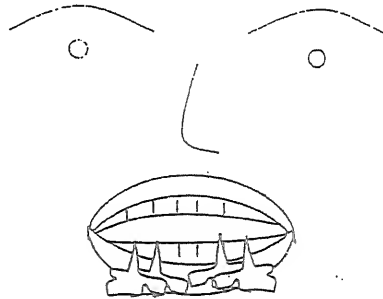
2. Senile purpura:

- Causes:
 - Prolonged topical fluorinated steroid.
 - Steroid injection.
- C.P.: areas of petechiae and ecchymoses on the dorsa of both hands and forearm.

3. Scurvy (ascorbic acid ↓↓↓):



Perifollicular petechiae.



Bleeding and friable gum occur on long standing cases.

4. Autoerythrocyte sensitization syndrome (painful bruising syndrome):

- Allergic sensitivity to EBCs.
- Recurrent attacks of red raised, tender painful ecchymoses.

Vascular causes

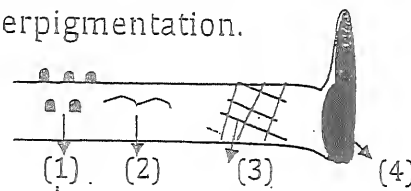
1. Cutaneous vasculitis (Leukocytoclastic vasculitis, Necrotizing vasculitis, Hypersensitivity vasculitis):

- **Definition:** it is characterized clinically by:
 - a. Purpuric papules (palpable purpura).
 - b. Urticarial wheals.
 - c. Necrotizing lesions and histopathological by neutrophilic infiltrate showing fragmentation of their nucleus (nuclear dust) + fibrinoid changes in the small dermal vessels + systemic affection may occur e.g. (renal involvement, arthritis, dyspnea, melena, abdominal pain & fever).

- **Clinically:**

- Skin lesions:

- 1) The commonest lesion is recurrent episode of palpable purpura that last for 1-4 wks, on healing → hyperpigmentation.
- 2) Itchy wheals.
- 3) Livedo reticularis.
- 4) Gangrene may occur.

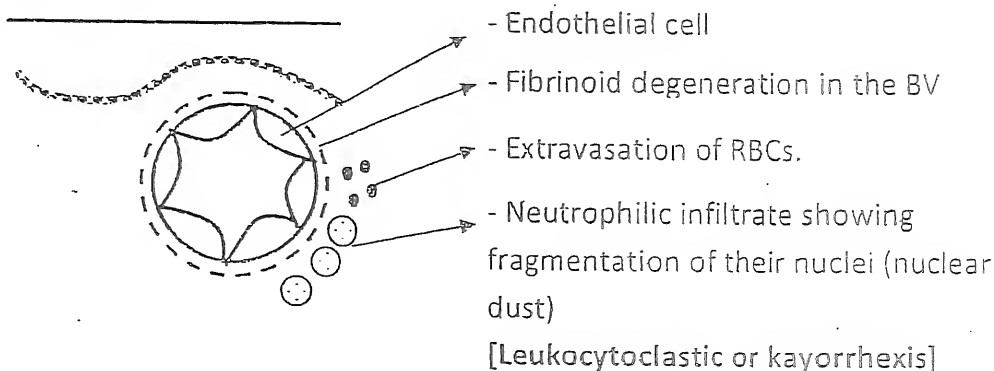


- Systemic affection:

- 1) Fever.
- 2) Dyspnea.
- 3) Arthritis.
- 4) Renal involvement.
- 5) Abdominal pain

Systemic manifestation are more common
In Henoch-Schönlein purpura.

- **Histopathology:**



- **Pathogenesis:**

Type III hypersensitivity reaction.

- **Aetiology:**

1) Infection:

- ☐ Viral: hepatitis B.
- ☐ Bacterial: Strept. (group A).
- ☐ TB & leprosy.

2) Drugs:

- ☐ Aspirin.
- ☐ Phenothiazine.
- ☐ Sulphonamide.

3) Diseases:

- ☐ Connective tissue diseases: SLE & Rh. Arthritis.
- ☐ Lymphoma.
- ☐ Inflammatory bowel disease.

4) Idiopathic:

- ☐ Henoch-Schönlein purpura.
- ☐ Hypersensitivity angitis.
- ☐ Urticarial vasculitis.